

## ABSTRACT

A pulmocardiac assistance apparatus is disclosed for use in the medical technology field to provide expiratory and inspiratory functionality to patients with respiratory disorders. The pulmocardiac assistance device of the present invention functions to collect body response feedback and manages this feedback to achieve an optimum response. The device includes an integrated set of pressure cuffs for pressuring different parts of the body in accordance with a predetermined sequence to induce the patient to breathe out or expire air from the lungs or to even produce an assisted cough, as well as to promote circulation of blood from the extremities of the body to the head. The pulmocardiac assistance device further includes a programmable logic controller which accepts inputs from sensors (e.g. patient temperature, blood gas concentrations, arterial pH level) and makes calculations to control both ventilator and pressure cuffs.

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